Libra MAX-SS
Fixed WiMAX Subscriber Station

Known for reaching all requirments and delivering outstanding flexibility EION Wireless has created a subscriber station model, Libra MAX-SS for high performace residential applications.

SoHo Outdoor Subscriber Station

WiMAX
FORUM
PRINCIPAL
COMPANY

Advanced Non-Line-of-Sight

The Libra MAX-SS uses 802.16d WiMAX technology to deliver high-speed non-line-of-sight (NLOS) performance in the licensed 3.3 to 3.6 GHz range. Optimized for outdoor environments, WiMAX offers superior range and throughput to subscribers who are not in a direct line of sight to the base station. EION Wireless is a principal member of the WiMAX forum and as such we are committed to performing rigorous interoperability testing of our products to ensure they are compatible with the majority of WiMAX equipment.

Enterprise Network Management

Libra MAX takes a carrier-grade approach to network management with a rich Graphical User Interface (GUI) for element management and SNMPv2 with enterprise MIBs for Network Management. Using these management features, a network administrator can easily control a large Libra MAX network from a single central location. EION's Enterprise MIB allows the monitoring of RF statistics like power, RSSI, and modulation.

Intelligence in WiMAX

EION Wireless is bringing advanced networking capabilities to the WiMAX stage. QoS features in the subscriber station are designed for the provisioning of voice video and data services. With the ability to support up to 16 different service flows per subscriber station, operators can offer service packages tailored for unique customer requirements.

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SoHo Outdoor
Subscriber Station

Rugged Outdoor Performance

The Libra MAX-SS is built for the outdoors to withstand the elements. Packaged in a ruggeddized all-weather enclosure, EION Wireless has a reputation for building rugged outdoor radios; our products have been deployed in the humidity of Amazon Rainforest and the extreme cold of Northern Canada. To simplify the installations, power is supplied to the outdoor unit from an indoor power over Ethernet (PoE) module.

Applications

Enterprise MDU/MTU

Making use of Libra MAX, service providers can increase their ARPU by offering more services to more subscribers without increasing their infrastructure costs. In fact, the Libra MAX MTU/MDU solution works with traditional wire line infrastructure and makes use of the advanced networking features in NetMOS™ to provide layer-2 customer separation. With Libra MAX, service providers can extend their physical reach-adding more MDU/MTU organizations--as well as reduce costs and increase their overall subscriber base.

Urban Hotzones

EION's hotzone solution raises the bar for reliability, speed and coverage. Using the global wireless standard IEEE 802.11 or WiFi, along with WiMAX backhaul products EION based hotzones enable your customers to simultaneously connect to the internet or their corporate networks at broadband speeds in virtually any public place, without the constraints of wires or cables. EION's field-proven fixed wireless products provide a cost effective backhaul by eliminating the need for expensive fiber.

E1/T1 over WiMAX

Many service providers overlook a vital part of their network: backhaul. Once customer traffic reaches the remote office or cell site, this data needs to be reliably transported back to switches and internet gateways. Wireless backhaul is a low-cost way to connect cell towers to mobile telephone switching offices (MTSOs). With WiMAX, Libra MAX provides throughput at several times that which can be delivered by conventional hard-wired networks-making Libra MAX an extremely cost-effective backhaul alternative.

Features

- Ruggedized all-weather enclosure
- Integrated/non-integrated antenna
- Carrier-class performance in the 3.3 to 3.6 GHz licensed bands
- Best in class spectral efficiency and non-line-of-sight operation
- 802.16d fixed WiMAX
- Up to 16 different QoS service flows per subscriber station
- 20 Mbps throughput
- LOS/NLOS Capability
- Management via Constellation NMS
- Configuration via web-based GUI
- Single click software upgrade
- Secure administrative interface

More Subscribers. More Reach. More Performance.

Libra MAX-SS

RADIO SPECIFICATIONS	LIBRA MAX-SS SOHO OUTDOOR WIMAX SUBSCRIBER STATION		
Standard	IEEE 802.16-2004		
PHY Profile	256FFT OFDM		
Frequency	3.3 to 3.8 GHz; 5.725 to 5.875 GHz		
Antenna	17 dBi or 20 dBi or N-type connector, 24 dBi		
Duplex Scheme	TDD		
TX Power	+20 dBm max (3.3-3.6GHz and 5.8 GHz) +17 dBm (3.6-3.8GHz)		
Receive Sensitivity (at 10E-6 BER)	3.5 MHz	7 MHz	10 MHz
BPSK 1/2	-94	-91	-88.5
QPSK 1/2	-91	-90	-85.5
QPSK 3/4	-90	-87	-83.0
16-QAM 1/2	-87	-84	-80.0
16-QAM 3/4	-84	-81	-76.5
64-QAM 2/3	-80	-77	-72.5
64-QAM 3/4	-78	-75	-70.5
Channel Size	3.5 MHz, 7 MHz, 10 MHz (5GHz)		
Traffic Classifcation	TCP/IP		
Ranging	Auto only		

WIRELESS NETWORKING	
Scheduling (QoS)	Yes
Supported Frame sizes	Standard
Polling	WiMAX Default
AFS	Not supported
RF Alignment Utility	External LED display (signal strength)

NETWORKING FEATURES	
Routing Support	Static
Bridging Mode	Yes
Interfaces	10/100Base-T
VLAN(802.1q)	Yes

SECURITY	
Data Scrambling/Encryption	DES-CBC, AES-CCM
Data Security Password	Yes
Configuration Security	Yes
Key Exchange	PKM

MANAGEMENT	
Remote Management	GUI based NMS
Remote Access Monitoring	SNMP, Web-based GUI, Telnet, SSH
Software Upgrade	Yes
Subscriber Confguration File	No
Authentication & Registration	PKM, X.509 Certificates

PHYSICAL, ELECTRICAL & ENVIRONMENTAL	
Input Voltage	18 VDC
Enclosure	IP67
Dimensions	17 dBi (264mm x 219mm x 64mm) 20 dBi (406mm x 362mm x 64mm) N-Type (264mm x 219mm x 64mm)
Regulatory Compliance	CE/Industry Canada, FCC Part 90 (3.65GHz), EMC: EN 301 489, Safety: EN 60950, Radio: EN 302 217, IP67, RoHS
Operating Temperature	-40° C to +55° C

Powered by WiMAX FORUM CERTIFIED Wavesat

RoHS Compliant

PulseSupply pulsesupply.com

2006 Communications SOLUTIONS Product Of The Year

Deloitte. 2007 Wireless Fast 50

EION Wireless, a division of EION Inc., is a global provider of Broadband Wireless Access products that enable effective, economic and secure wireless high-speed communications solutions. EION is a Principal Member of the WiMAX Forum and was named one of the fastest fifty growing wireless companies in North America by Deloitte and Touche. With over ten thousand broadband wireless installations worldwide, the company's licensed and unlicensed frequency products are used by wireless ISPs, private network operators, and remote rural networks and in voice and data backhaul applications to solve last mile challenges. EION Wireless works with more than 165 worldwide channel partners to support its diverse global customer base.